



File Code: 3410
Date: July 27, 2015

Susanne Baird
Refuge Manager
USDI Fish and Wildlife Service
Chesapeake Marshlands National Wildlife Refuge Complex
2145 Key Wallace Drive
Cambridge, MD 21613

Dear Ms. Baird:

On June 24, 2015, personnel from the USDA Forest Service, Forest Health Group in Morgantown, WV conducted a ground defoliation survey within the 2015 gypsy moth spray block at the USDI F&WS, Blackwater National Wildlife Refuge in Cambridge, MD (part of the Chesapeake Marshlands National Wildlife Refuge Complex). A total of 23 plots were established (see attached map). An average estimate of the oak defoliation within the view from each plot center was recorded. All survey locations, with the exception of plot 23, were determined to have very light, very scattered defoliation and hardly noticeable without looking for it. Plot 23 had zero defoliation. This level of defoliation/damage does not cause significant stress to the oak trees. Also detected were gypsy moth caterpillars killed by the Nucleopolyhedrosis virus (NPV, Gypchek) and *Entomophaga maimaiga* fungus.

Personnel from our office will be conducting a gypsy moth egg mass survey at Blackwater NWR in late August or September to determine the current population. The results of the egg mass survey will determine if the area needs to be retreated in 2016.

We will continue to coordinate with Matt Whitbeck and Nate Carle at Blackwater Wildlife Refuge; their assistance has been greatly appreciated.

If you have any questions concerning this defoliation survey, please contact Karen Felton at 304-285-1556.

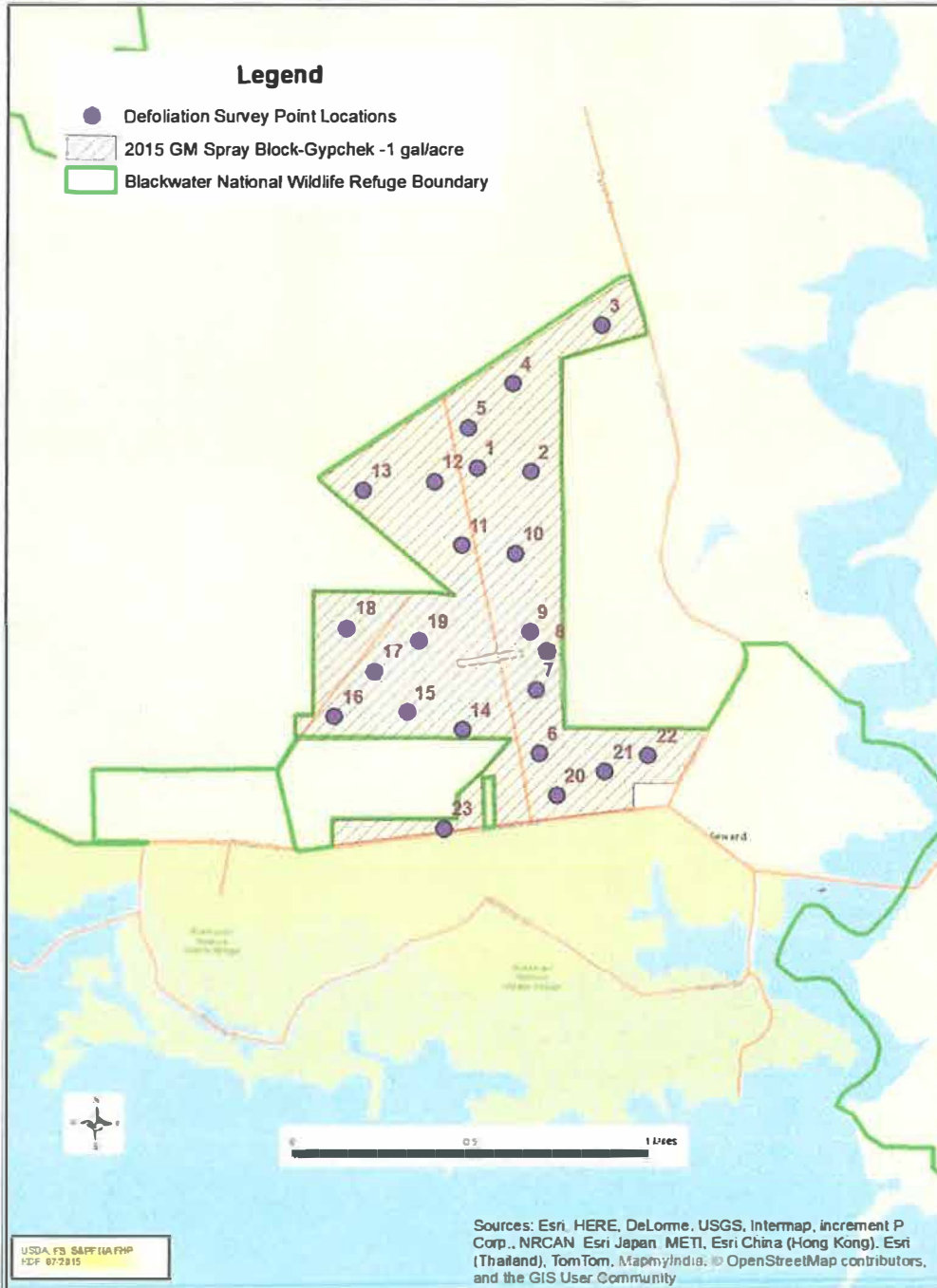
Sincerely,

ROBERT LUECKEL
Field Representative

cc: Matt Whitbeck, CMNWRC; Jeff Horan, Forest Ecologist, Regional Office, USDI, F&WS;
Bob Tatman, MDA



Location where ground defoliation survey plots were established within the 2015 gypsy moth spray block at Blackwater National Wildlife Refuge, June 24, 2015.
Very light, very scattered defoliation detected at most locations, at levels barely noticeable without specifically looking for it.



USFS Gypsy Moth Suppression Project Summary 2015

Blackwater NWR (Other Federal)

Proposed Acres: 500 1 application at higher dose rate

Treated Acres 500 1 application at higher dose rate

Project Objectives:

1. To prevent defoliation in excess of 30% of the normal leaf complement of trees on 80% of the treatment block.
2. To reduce egg mass levels below treatment thresholds

Contractor(s): Helicopter Applicators, Inc

Aircraft: Bell OH-58

Formulation(s): Gypchek 1.0 gal/acre @ 4x10¹¹ OB/ac

Cost/acre (including application):

Helicopter Applicators plus Carrier \$41.31/acre Gypchek
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Federal Share: \$20,657

State Share: \$0

Percent Acres Treated: Federal 0

Percent Acres Treated Successfully:

1. 100% (based on objective 1)
2. 0% (based on objective 2)

Number of Landowners Treated: 0

Number of Communities Treated: 0

Defoliated Area: 0

Acres to be Retreated: 500